

Applicant: Griffin
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Filed: 03/17/2004
Title: COMPACT FOLDABLE RAMP
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IN THE CLAIMS

Kindly amend the following claims as indicated.

1. (Currently amended) A portable foldable ramp comprising
~~first, second, third and fourth a plurality of ramp sections disposed~~
~~longitudinally end to end, each section comprising a runway with an a top~~
~~surface and a lower surface and longitudinal first and second ends,~~
~~a hinge with a hinge bar connecting each pair of adjacent ramp sections end~~
~~to-end longitudinally, including a hinge bar, and~~
~~end members transverse on adjacent ramp section longitudinal first and~~
~~second ends each end member with an abutting surface facing outward~~
~~from its respective section end with its normal longitudinal with the ramp~~
~~adapted the runway ending at the end members with opposing said~~
~~abutting surfaces of said end members of adjacent sections directly~~
~~abutting together longitudinally when the ramp is unfolded, rotating on~~
~~said hinges into and out of abutment such that load forces are conveyed~~
~~through abutted sections to ramp ends, said hinge spaced apart from said~~
~~end members so as not to interfere with said end member abutment,~~
~~wherein said hinges respectively connecting the abutting section ends are~~
~~disposed under section runway lower surfaces such that all sections curl~~
~~together in a same first direction of rotation to fold and uncurl in a second~~
~~direction of rotation opposite said first direction of rotation to unfold, a~~

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runway undersurface of the a first section at a ramp first end folding into parallel face-to-face opposition with a runway undersurface of the an adjacent second section forming a pair of sections, said pair of sections rotating with the top surface of said first section folding into parallel face-to-face opposition with the bottom surface of the a third section adjacent said second section forming a trio of sections, said trio of sections rotating with the upper section of said second section folding into parallel face-to-face opposition with the bottom surface of the fourth section forming a compact quartet of sections.

2. (Cancel) The portable foldable ramp of claim 1 in which the end members come into abutment with adjacent sections unfolded to less than 180 degrees, the sections collectively forming an approximate arc bowed downward.
3. (Currently amended) The portable foldable ramp of claim 1 wherein a lower adjacent section and an adjacent upper section of said plurality of sections each further comprising comprise strengthening ribs extending longitudinally along the respective runway bottom surfaces between section end members and terminating in longitudinal abutment with said end members with the respective a said hinge bars bar passing through rib holes longitudinally between the section end members on one at an upper end of said lower

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section end-and with rib hinge ears extending downward from the ribs on another-a lower end of said upper section end extending from the ribs beyond the section ends-end member at said lower end of said upper section to the respective-said hinge bar which passes-passing through said rib holes in the rib-ears in like manner of the section panels in said upper end of said lower section below the ribs of the lower section.

4. (Currently amended) The portable foldable ramp of claim 1 wherein the hinges are spaced apart from the runway bottom surfaces respective measured distances-such that the ramp folds in curling fashion with sections in stacked nesting with section surfaces into close face-to-face opposition.
5. (Currently amended) The portable foldable ramp of claim 1 wherein said end members comprise a plurality of end member portions and wherein each section comprises a plurality of inverted-open-boxes open at their bottoms comprising lateral sides with longitudinal ends of boxes collectively comprising said section end members member portions bridging adjacent lateral sides, with outer lateral sides of outer-boxes on section sides comprising section panels, and with inner lateral sides of boxes forming comprising longitudinal strengthening ribs therein closing each box circumference.

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6. (Currently amended) The portable foldable ramp of claim 1 wherein the hinge between a lower adjacent section and an adjacent upper section of said plurality of sections further comprises
~~a said hinge bar passing through section hinge holes in a hinge plate extending vertically downward under the runway lower surface of a first, or lower, the lower section longitudinally between the section end members at an upper end of said lower section inward the first section from a first section end member on a first section first end, and~~
a hinge ear on a second lower end of a second, or upper, the upper section adjacent the first section extending longitudinally downward from the second section under the runway lower surface of the first lower section alongside said hinge plate of the lower section aligning holes in the hinge plate and the hinge ear through which holes the hinge bar passes such that when the second upper section folds under the first lower section it the upper section is under the lower section inward of the end member at the first lower section first upper end.
7. (Currently amended) The portable foldable ramp of claim 6 wherein each second upper section of an adjacent pair is smaller than its subsequent adjacent first lower section both longitudinally and transversely such that it the upper section fits within it the lower section.

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8. (Currently amended) The portable foldable ramp of claim 6 wherein said hinge ears of said ~~second adjacent upper section~~ fit on the hinge bar inward of the hinge plate of the ~~first adjacent lower section~~.
9. (Previously presented) The portable foldable ramp of claim 6 wherein the sections further comprise vertical panels on section lateral sides from which the hinge ears and hinge plates extend.
10. (Previously presented) The portable foldable ramp of claim 9 wherein the section panels of each side slide in scissor-like fashion with respective section panels of an adjacent section upon ramp folding, mutually aligning the folding sections.
11. (Currently amended) The portable foldable ramp of claim 1 further comprising a wheel on each side of the third section near its end adjacent the second section extending beyond said end such that ~~when the third section is folded into the fourth section, the wheel extends longitudinally beyond the folded ramp sections and the folded ramp is wheelable on said wheels.~~
12. (Canceled) The portable foldable ramp of claim 11 wherein the fourth section is of length such that the folded ramp stands freely on its wheels and the fourth section distal end.

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13. (Canceled) The portable ramp of claim 11 wherein the hinge bar between third and fourth sections is accessible as a handle in negotiating the wheelable folded ramp.
14. (Previously presented) The portable foldable ramp of claim 3 wherein ribs of adjacent panels fold side by side in scissor-like fashion in aligning the sections during folding.
15. (Currently amended) The portable foldable ramp of claim 14 3 wherein each first section rib comprises first and second parallel spaced apart rib members forming a slot therebetween aligned with a rib of the third section such that upon folding the first and second sections as a pair into nesting configuration with the third section, the ribs of the third section move into said first section slots, therein enabling the first section runway top surface to move into close parallel opposition with the third section lower surface impeded-unimpeded by third section ribs.
16. (Currently amended) The portable foldable ramp of claim 14 3 further comprising said trio of sections rotating with the upper section of said second section folding into parallel face-to-face opposition with the bottom surface of a fourth section adjacent said third section forming a compact quartet of sections wherein each second section rib comprises first and second parallel spaced apart rib members forming a slot therebetween aligned with a rib of

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the fourth section such that upon folding the first, second and third sections as a trio into nesting configuration with the fourth section, the ribs of the fourth section move into said second section slots, therein enabling the second section runway top surface to move into close parallel opposition with the fourth section lower surface impeded-unimpeded by fourth section ribs.

17. (Currently amended) A portable foldable ramp comprising multiple segments hinged end to end and foldable on hinges, sections decreasing in size both longitudinally and transversely from a largest section on a first ramp end to a smallest section on a second ramp end, the ramp curling in folding beginning with the smallest section nesting in a next larger adjacent section until the two largest section on the first end sandwich the smaller sections nested therebetween with all sections in parallel disposition.

18. (Previously presented) The portable foldable ramp section of claim 17 wherein all sections curl relatively in the same first rotational direction in folding, and in a same second rotational directional opposite the first rotational direction in unfolding, limited in unfolding rotation by section end to end abutment.

19. (Currently amended) A portable foldable ramp comprising first, second, third and fourth a plurality of ramp sections disposed longitudinally end to end, each section comprising a runway with an-a top surface and a lower surface and longitudinal first and second ends,